

Claims

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Thermoplastic polymer mixtures containing at least one polycarbonate and at least one mould release agent with at least one polyol component, characterised in that at least one polyol component (I) consists of a parent substance with 4 or more carbon atoms, 3 or more hydroxyl groups, more than one hydroxyl group esterified with aliphatic carboxylic acids and one or preferably more than one free hydroxyl group.

- 10 2. Thermoplastic polymer mixtures according to Claim 1, characterised in that the parent substance contains 4 to 12 carbon atoms, preferably 4 to 8 carbon atoms, particularly preferably 5, 6 or 7 carbon atoms, very particularly preferably 5 or 6 carbon atoms and even more preferably 5 carbon atoms.
- 15 3. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that the aliphatic carboxylic acids are C_2 - C_{30} fatty acids, preferably C_5 - C_{25} fatty acids, preferably C_8 - C_{24} fatty acids, particularly preferably C_{12} - C_{22} fatty acids, very particularly preferably C_{16} - C_{20} fatty acids and even more preferably C_{16} - C_{18} fatty acids or mixtures of these fatty acids.
- 20 4. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that polyol component (I) is used in amounts of 0.005 wt.% to 0.5 wt.%, preferably 0.01 wt.% to 0.2 wt.%, very particularly preferably 0.015 wt.% to 0.1 wt.%, and even more preferably 0.02 wt.% to 0.08 wt.%.
- 25 5. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that, in polyol component (I), a carbon atom with a hydrogen substituent is not located immediately adjacent to a carbon atom with hydroxyl groups.
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6. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that, in polyol component (I), the number of esterified and of free hydroxyl groups is the same.
7. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that the ratio of the amount of polyol component (I) in the mould release agent to other optionally present components in the mould release agent is greater than 1:1.
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8. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that the proportion of polyol components with less than one free hydroxyl group or polyol components with less than two esterified hydroxyl groups in the entire mould release agent are each less than 24 wt.%, preferably less than 20 wt.%, particularly preferably less than 15 wt.% and even more preferably less than 10 wt.%.
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9. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that in addition other ingredients and/or additives conventionally used in polycarbonate mixtures such as e.g. preferably stabilisers, flame retardants, antistatic agents, fillers, foaming agents, colorants etc. are present.
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10. Thermoplastic polymer mixtures according to at least one of the preceding Claims, characterised in that at least one polycarbonate is present which contains bisphenol A and/or trimethylcyclohexyl bisphenol (TMC) as diol blocks, preferably being chosen from the group of homopolymers of bisphenol A, copolymers of bisphenol A with TMC or copolymers with 5 to 50 wt.% of TMC.
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11. Use of polyol components (I) from at least one of Claims 1 to 6 as mould release agents for thermoplastic polymer mixtures containing at least one polycarbonate.

- 5 *Sub 12*
28/12. Moulded items made from thermoplastic polymer mixtures according to at least one of Claims 1 to 10, preferably for optical applications, particularly preferably for optical data carriers, very particularly preferably compact discs and DVDs.

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